

3D visualization of reconstructed settlements on web

Abstract

The object of this thesis was 3D reconstruction and visualization of historical urban objects in web environment. The thesis also deals with issues associated with the topic and creation of a web portal for publishing 3D reconstructions of different authors.

A 3D reconstruction of historical appearance of the Theatre Square and part of Korso street in the city Uzhgorod was held. Modeling was conducted in the Trimble SketchUp software using historical pictures for photo textures of buildings. Web application has been developed using the tools of Google Earth API. The work results in a web application involving visualization of 3D models of buildings in Google Earth environment, virtual tours, tools for illumination control, placemarks with popup balloons, carrying multimedia and textual information about the objects and other visualization tools.

Keywords: 3D reconstruction, Google Earth API, SketchUp, web application, Uzhgorod